

Work Order ID 83450

83450

Page 1

Wednesday, April 18, 2012 8:42:47 AM

Item ID: D6101-007 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle Billet
 Start Date: 4/18/2012 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 4/25/2012 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 12/04/18 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	Rev B								
100	PURCHASING	0.00							
100									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>16754</u>								
	a) Description: Alluminum billet								
	b) 7.750" x 8.250" x 2.50" thick								
	c) Tolerance on all dimensions are +0.030"/-0.000"								
	d) Grain direction along 7.750" length								
	e) Material: 7075-T7351 (QQ-A-250/12)								
	f) Material certification required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

12-04-18

Perp/01 (3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83450

83450

Page 2

Wednesday, April 18, 2012 8:42:47 AM

Item ID: D6101-007 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle Billet
 Start Date: 4/18/2012 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 4/25/2012 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC6- Inspect dimensions to drawing Memo Ensure Material certification comply to Dwg D6101	0.00 0.00	<i>ork 12/05/03</i>			30	<i>x</i>		
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <i>MAT 41</i> Memo	0.00 0.00	<i>ork 12/05/03</i>			30	<i>x</i>		
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<i>12/5/17</i>

1205-3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, April 18, 2012 8:42:52 AM

Page 1

Work Order ID: 83450

83450

Parent Item: D6101-007

D6101-007

Parent Item Name: Saddle Billet

Start Date: 4/18/2012

Required Date: 4/25/2012

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP A: 01.05.04New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-007P		Purchased	No			110	Each	0.0000	1	30			
D6101-007P									**				
7075-T7351 8.25X7.75X2.5													

Handwritten signature (30)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

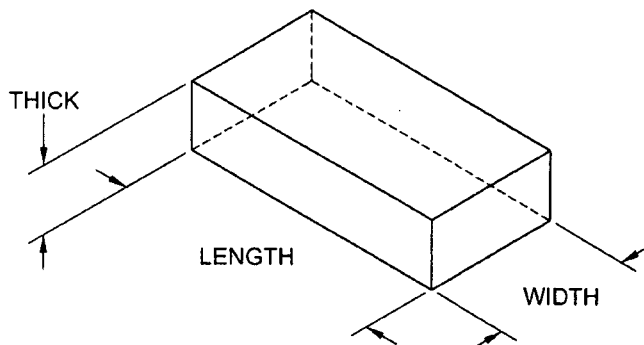
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/WP

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 83750 HCS
 12/04/18

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	PH	D6101	SHEET 1 OF 1
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Castle Metals®**

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 1289214

Expédié de / Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Expédié à / Ship To: WILL CALL-MONTREAL 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Livré à / Deliver To: WILL CALL-MONTREAL 835 SELKIRK AVENUE POINTE CLAIRE, QC H9R 3S2 CA			
Date d'expédition / Date Shipped 27-APR-2012		F.O.B. ORIGIN		Modalités de transport / Freight Terms Prepaid		Transporteur / Carrier MANITOULIN		No du Bon de connaissance / BOL No 1289214-2	

Détails d'expédition / Shipment Details				Destination finale / Final Destination Branch - MON			
--	--	--	--	--	--	--	--

N° de commande / Order No	N° de ligne / Line No	N° d'article / Item No	Description
2146371	2	752241.MO	2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.75")) X 7.75 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.75")) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12
N° de bon de commande / Purchase Order No 16754		Nbre de pièces / Part Number YOUR ITEM NUMBER: D6101-007	
		Qté commandée / Ordered Qty 30.00 PCS	Qté Facturée / Invoice Qty 30.0000 PCS

Détails / Details		N° de coulée / Heat Number	Code méc / Mech Id	Pièces / PCS	Largeur (Pouce) / Width (IN)	Longueur (Pouce) / Length (IN)	Qté expédiée / Shipped Qty(LBS)
N° de livraison / Delivery No :	Usine / Mill						
117574302		467299A4		9	(30)		148.79
117574302		405872A3		9			148.79
117574302		436191		12			198.38

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.
These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.
Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.



Castle Metals®

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 2 of 2

essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.		
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.		
Ce matériel a été reçu et inspecté par Reviewed by Authorized Castle Metals Representative:	Date:	Name:

SHIP TO:

CASTLE METALS AEROSPACE
4175 ROYAL DRIVE, SUITE 600
KENNESAW, GA 30144

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4160783

SOLD TO:

CAS AERO% A M CASTLE METALS
ATTN:BOB OHR % ACCTS PAYABLES
3400 NORTH WOLF RD
FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 7748		WORK PACKAGE:	CUSTOMER PART NUMBER: 752241 AMC CA-15745		SHIP RUN/LOAD ID: 101523/21	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1080685	LINE ITEM: 1	SHIP DATE: 23-APR-2009	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE	
WEIGHT SHIPPED: 8988 LB	QUANTITY: 5 PCS EST.	B/L NUMBER: 2022418		GAUGE: 2.5000 IN	WIDTH: 48.500 IN	LENGTH: 144.500 IN	

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
DPS 4.713/RevAH
GSS16100/RevG/Amd1

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevE
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Results

Test Code: 4297

Lot: 467299A4 Cast 222

Drop 18

Ingot 1

(ASTM E8/B557)
(EN 2002-1)

Tensile: Temper
T7351

Dir / # Tests
LT / 2 (Min:Max)

Ultimate KSI (MPA)
72.8 : 73.0
(502 : 503)

Yield KSI (MPA)
61.3 : 61.5
(423 : 424)

Elongation %
11.1 : 11.1



(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :
(MS/M) :

40.6 Min
23.5 Min

40.8 Max
23.7 Max

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APR 27 2009

(ASTM E1251)

Chemistry:
Actual

SI
0.10

FE
0.20

CU
1.5

MN
0.02

MG
2.5

CR
0.20

ZN
5.7

TI
0.04

V
0.01

ZR
0.01

TOT

OTHER
0.05

KAISER

ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4160783

Lot: 470001A9 Cast 222 Drop 27 Ingot 2

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	72.4 : 74.4 (499 : 513)	60.3 : 63.3 (416 : 436)	11.1 : 11.2

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	39.8 Min	41.6 Max
(MS/M) :	23.1 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.19	1.5	0.02	2.5	0.20	5.8	0.04	0.01	0.01	TOT 0.05

Lot: 470010A0 Cast 222 Drop 29 Ingot 3

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	72.7 : 74.4 (501 : 513)	60.7 : 63.7 (419 : 439)	10.7 : 11.2

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.8 Min	41.2 Max
(MS/M) :	23.7 Min	23.9 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.20	1.5	0.03	2.4	0.20	5.6	0.04	0.01	0.01	TOT 0.05

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

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APR 27 2009



**KAISER
ALUMINUM**

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4160783

TEST NOTES

7075-T7351 plate 3.001-3.500" thick, if ultrasonically inspected, meets requirements of CMMPO25 per SDR CMMPO25-KaiserT-1. 7075-T7351 plate 3.501-5.000" thick, if ultrasonically inspected, meets requirements of CMMPO25 per SDR CMMPO25-KaiserT-2.

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.



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APR 27 2009

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

SHIP TO:

TRANSTAR METALS
4611 EAST 31ST STREET
WICHITA, KS 67210

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4125515

SOLD TO:

TRANSTAR METALS INC.
ATTN: ACCOUNTS PAYABLE DEPT.
970 W. 190TH STREET
SUITE 700
TORRANCE, CA 90502

CUSTOMER PO NUMBER: 00144136		WORK PACKAGE:		CUSTOMER PART NUMBER: 152500X557L		SHIP RUN/LOAD ID: 101252/7		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1064442	LINE ITEM: 1	SHIP DATE: 31-MAR-2008	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE			
WEIGHT SHIPPED: 13660 LB	QUANTITY: 6 PCS EST.	B/L NUMBER: 2017102	GAUGE: 2.5000 IN		WIDTH: 55.000 IN		LENGTH: 161.000 IN		

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
GSS16100/RevG
PS 21211/RevK

AMS-QQ-A-250/12
ASTM B 594/Rev06
CSTI 006/RevC
MIL-STD-2154

AMS-STD-2154
BAC 5439/RevH
DPS 4.713/RevAH
MMS 159/RevN

Test Results

Test Code: 4297

Lot: 405872A3 Cast 158

Drop 05

Ingot 4

(ASTM E8/B557)

Tensile: Temper
T7351Dir / # Tests
LT / 2 (Min:Max)Ultimate KSI (MPA)
70.0 : 71.9
(483 : 496)Yield KSI (MPA)
58.3 : 60.7
(402 : 419)Elongation %
8.1 : 10.1

(ASTM E1004)

Conductivity %IACS :
(MS/M) :40.7 Min
23.6 Min41.2 Max
23.9 Max

(ASTM E1251)

Chemistry:
ActualSI
0.10FE
0.20CU
1.5MN
0.02MG
2.5CR
0.20ZN
5.6TI
0.03V
0.01ZR
0.01

TOT

OTHER
0.03

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APR 03 2008
TRANSTAR METALS
By _____

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4125515

Lot: 427571A5 Cast 158 Drop 18 Ingot 4

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.6 : 72.3 (494 : 499)	60.1 : 61.6 (414 : 425)	11.6 : 11.8

(ASTM E1004)

Conductivity %IACS :	41.4 Min	41.9 Max
(MS/M) :	24.0 Min	24.3 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.15	1.4	0.02	2.4	0.21	5.7	0.02	0.01	0.01	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR



003-13-'09 07:11 FROM-a m castle metals

CASTLE METAL SHED

DATE REC'D 3-9-09

REC'D FROM 5777

APPROVED BY CB

T-504 P042/058 F-466

3165223453

03-13-'09 07.11 FROM-a m castle metals

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Per:

Malcolm Murphy
Malcolm Murphy
Director of Manufacturing Davenport Works

Kenton P. Young
Kenton P. Young
Quality Assurance Manager

1005842	0				
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item	Page 2
2009-03-06	3535272	00000	1000078823-1		
P.O. No./Govt Contract No.	Customer	Alcoa Item	Mfg Order		
23-14882	CASTLE A M	G041005634R10	DS-78823-02-1		

CQR: 0137890.19 -Specification Limits (cont.)

Lot: 436191 - Mechanical, Physical, Metallography, Quantumeter Results

Temp	Dir	No->	UTS	TYS	EL&D
		Test	KSI	KSI	PCT
T7351	Long Transv.	3	69.3	58.1	10.4
			69.6	58.3	10.4
			69.7	58.4	10.3

T7351 Elect Cond %IACS 40.7 40.9 40.9 PCT

Cast Number	Chemical	OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9167056	Actuals	0.07	0.28	1.6	0.03	2.5	0.19	5.7	0.02	

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

